

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Currently amended) A method for determining an amount of storage for a
2 level of detail other than the base image in a MIP map, comprising:
3 identifying a ~~given first~~ level of detail other than the base image;
4 identifying a size for an immediately larger level of detail and a magnitude for
5 each dimension of the immediately larger level of detail; and
6 calculating the amount of storage to be used for storing the first level of detail
7 based on the size and magnitudes without using a multiply operation.
- 1 2. (Original) The method of claim 1, wherein calculating comprises:
2 scaling the size.
- 1 3. (Currently amended) The method of claim 2, wherein scaling comprises:
2 dividing each of the magnitudes by two and discarding any remainders; and
3 dividing the size by 2^n and discarding any remainder, where n is the number of
4 non-zero magnitudes remaining after dividing each of the magnitudes;
5 wherein the size after dividing the size is the amount of storage for the ~~given first~~
6 level of detail.
- 1 4. (Original) The method of claim 3, further comprising:
2 adding one to the amount of storage when any of the n least significant bits of the
3 size of the immediately larger level of detail is non-zero.
- 1 5. (Original) The method of claim 3, wherein dividing each of the
2 magnitudes comprises:
3 shifting the binary value of the magnitude to the right by one bit.

1 6. (Original) The method of claim 3, wherein dividing the size comprises:
2 shifting the binary value of the size to the right by n bits.

1 7. (Original) The method of claim 1, wherein a storage alignment restriction
2 requires the starting address for each level of detail to be a multiple of m pixels from a
3 predetermined address, wherein identifying a size and magnitudes comprises:
4 identifying the size and magnitudes in units such that each unit contains m pixels.

1 8. (Currently amended) An apparatus for determining an amount of storage
2 for a level of detail other than the base image in a MIP map, comprising:
3 means for identifying a ~~given-first~~ level of detail exclusive of the base image;
4 means for identifying a size for an immediately larger level of detail and a
5 magnitude for each dimension of the immediately larger level of detail; and
6 means for calculating the amount of storage to store the first level of detail
7 based on the size and magnitudes without using a multiply operation.

1 9. (Original) The apparatus of claim 8, wherein means for calculating
2 comprises:
3 means for scaling the size.

1 10. (Currently amended) The apparatus of claim 9, wherein means for scaling
2 comprises:
3 means for dividing each of the magnitudes by two and discarding any remainders;
4 and
5 means for dividing the size by 2^n and discarding any remainder, where n is the
6 number of non-zero magnitudes remaining after dividing each of the magnitudes;
7 wherein the size after dividing the size is the amount of storage for the ~~given-first~~ level of detail.
8

1 11. (Original) The apparatus of claim 10, further comprising:
2 means for adding one to the amount of storage when any of the n least significant
3 bits of the size of the immediately larger level of detail is non-zero.

1 12. (Original) The apparatus of claim 10, wherein means for dividing each of
2 the magnitudes comprises:
3 means for shifting the binary value of the magnitude to the right by one bit.

1 13. (Original) The apparatus of claim 10, wherein means for dividing the size
2 comprises:
3 means for shifting the binary value of the size to the right by n bits.

1 14. (Original) The apparatus of claim 8, wherein a storage alignment
2 restriction requires the starting address for each level of detail to be a multiple of m pixels from a
3 predetermined address, wherein means for identifying a size and magnitudes comprises:
4 means for identifying the size and magnitudes in units such that each unit contains
5 m pixels.

1 15. (Currently amended) A computer program product, tangibly stored on a
2 computer-readable medium, for determining an amount of storage for a level of detail other than
3 the base image in a MIP map, comprising instructions operable to cause a programmable
4 processor to:
5 identify a ~~given~~first level of detail other than the base image;
6 identify a size for an immediately larger level of detail and a magnitude for each
7 dimension of the immediately larger level of detail; and
8 calculate the amount of storage to store the first level of detail based on the size
9 and magnitudes without using a multiply operation.

1 16. (Original) The computer program product of claim 15, wherein
2 instructions operable to cause a programmable processor to calculate comprise instructions
3 operable to cause a programmable processor to:
4 scale the size.

1 17. (Currently amended) The computer program product of claim 16, wherein
2 instructions operable to cause a programmable processor to scale comprise instructions operable
3 to cause a programmable processor to:
4 divide each of the magnitudes by two and discarding any remainders; and
5 divide the size by 2^n and discarding any remainder, where n is the number of non-
6 zero magnitudes remaining after dividing each of the magnitudes;
7 wherein the size after dividing the size is the amount of storage for the ~~given~~first
8 level of detail.

1 18. (Original) The computer program product of claim 17, further comprising
2 instructions operable to cause a programmable processor to:
3 add one to the amount of storage when any of the n least significant bits of the
4 size of the immediately larger level of detail is non-zero.

1 19. (Original) The computer program product of claim 17, wherein
2 instructions operable to cause a programmable processor to divide each of the magnitudes
3 comprise instructions operable to cause a programmable processor to:
4 shift the binary value of the magnitude to the right by one bit.

1 20. (Original) The computer program product of claim 17, wherein
2 instructions operable to cause a programmable processor to divide the size comprises:
3 shift the binary value of the size to the right by n bits.

1 21. (Original) The computer program product of claim 15, wherein a storage
2 alignment restriction requires the starting address for each level of detail to be a multiple of m
3 pixels from a predetermined address, wherein instructions operable to cause a programmable
4 processor to identify a size and magnitudes comprise instructions operable to cause a
5 programmable processor to:
6 identify the size and magnitudes in units such that each unit contains m pixels.